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09/579,623	05/26/2000	Kemi Y. Ibitayo	Sprint IDF 1415	7837

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EXAMINER

MAHMOUDI, HASSAN

ART UNIT	PAPER NUMBER
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2175

DATE MAILED: 07/01/2004

21

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

09/579,623

Applicant(s)

IBITAYO ET AL

Examiner

Tony Mahmoudi

Art Unit

2175

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 16 April 2004.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-14 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

  
DOV POPOVICI  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 2100

### Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: \_\_\_\_\_

## DETAILED ACTION

### *Remarks*

1. In response to communications filed on 16-April-2004, claims 1-14 are presently pending in the application.

### *Specification*

2. The specification is objected to because the arrangement of the disclosed application does not conform with 37 CFR 1.77(b).

Section headings appear **boldfaced** throughout the disclosed specification. Section headings should not be **boldfaced**. Appropriate corrections are required according to the guidelines provided below:

3. The following guidelines illustrate the preferred layout for the specification of a utility application. These guidelines are suggested for the applicant's use.

#### **Arrangement of the Specification**

As provided in 37 CFR 1.77(b), the specification of a utility application should include the following sections in order. Each of the lettered items should appear in upper case, without underlining or bold type, as a section heading. If no text follows the section heading, the phrase "Not Applicable" should follow the section heading:

- (a) TITLE OF THE INVENTION.
- (b) CROSS-REFERENCE TO RELATED APPLICATIONS.
- (c) STATEMENT REGARDING FEDERALLY SPONSORED RESEARCH OR DEVELOPMENT.

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- (d) INCORPORATION-BY-REFERENCE OF MATERIAL SUBMITTED ON A COMPACT DISC (See 37 CFR 1.52(e)(5) and MPEP 608.05. Computer program listings (37 CFR 1.96(c)), "Sequence Listings" (37 CFR 1.821(c)), and tables having more than 50 pages of text are permitted to be submitted on compact discs.) or REFERENCE TO A "MICROFICHE APPENDIX" (See MPEP § 608.05(a). "Microfiche Appendices" were accepted by the Office until March 1, 2001.)
- (e) BACKGROUND OF THE INVENTION.
  - (1) Field of the Invention.
  - (2) Description of Related Art including information disclosed under 37 CFR 1.97 and 1.98.
- (f) BRIEF SUMMARY OF THE INVENTION.
- (g) BRIEF DESCRIPTION OF THE SEVERAL VIEWS OF THE DRAWING(S).
- (h) DETAILED DESCRIPTION OF THE INVENTION.
- (i) CLAIM OR CLAIMS (commencing on a separate sheet).
- (j) ABSTRACT OF THE DISCLOSURE (commencing on a separate sheet).
- (k) SEQUENCE LISTING (See MPEP § 2424 and 37 CFR 1.821-1.825. A "Sequence Listing" is required on paper if the application discloses a nucleotide or amino acid sequence as defined in 37 CFR 1.821(a) and if the required "Sequence Listing" is not submitted as an electronic document on compact disc).

*Claim Rejections - 35 USC § 103*

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hartley et al (U.S. patent No. 6,532,465) in view of Dong et al (U.S. Patent No. 6,499,023), and further in view of Lipkin (U.S. Patent No. 6,721,747.)

As to claim 1, Hartley et al teaches a framework (see Abstract, and see column 7, lines 12-13) for isolating a business component from specific implementations of a datastore (see column 5, lines 12-18, where “isolating a business component from specific implementation of a datastore” is read on “corresponding to one or more business objects that are highly specific to a client’s implementation), comprising:

(a) a database in communication with a business component (see figure 4, where “business component” is illustrated as “business objects 35, and “database” is illustrated as “database tables 39);

(b) a domain object factory in communication with the database (see figure 5, where “database” is illustrated as “external data source”);

(c) a domain object in communication with the domain object factory (see figure 4, where “domain object” is illustrated as “domain objects 37, and see “domain object factory 60 in figure 5); and

(d) a datastore in communication with the domain object (see “domain object factory 60” and “data store 65” in figure 5.)

Hartley et al does not teach a database wrapper; wherein the database wrapper provides an abstraction layer.

Dong et al teaches an object-focused workflow system (see Abstract) in which he teaches a database wrapper; wherein the database wrapper provides an abstraction layer (see column 5, lines 23-48.)

Therefore, it would have been obvious to a person having ordinary skill in the art at the time the invention was made to have modified Hartley et al to include a database wrapper; wherein the database wrapper provides an abstraction layer.

It would have been obvious to a person having ordinary skill in the art at the time the invention was made to have modified Hartley et al with the teaching of Dong et al because including a database wrapper; wherein the database wrapper provides an abstraction layer, would “provide abstract interfaces to the databases and reporting features of the other external components, exposing relevant data and update capabilities” , as taught by Dong et al (see column 5, lines 38-41.)

Hartley et al as modified, still does not teach providing an additional abstraction layer between the domain object factory and the business component.

Lipkin teaches method and apparatus for an information server (see Abstract), in which he teaches providing an additional abstraction layer between the domain object factory and the business component (see column 5, lines 26-32, see column 20, lines 16-22, see column 27, lines 4-8, and see column 29, lines 40-45.)

Therefore, it would have been obvious to a person having ordinary skill in the art at the time the invention was made to have modified Hartley et al as modified, to include providing an additional abstraction layer between the domain object factory and the business component.

It would have been obvious to a person having ordinary skill in the art at the time the invention was made to have modified Hartley et al as modified, by the teaching of Lipkin, because providing an additional abstraction layer between the domain object factory and the business component, would enable the system to improve portability between servers (see Lipkin, column 5, lines line 31), and to provide a richer level of functionality and to allow future modifications with minimal impact on the client application code (see Lipkin, column 27, lines 4-8.)

As to claim 2, Hartley et al as modified teaches wherein the database wrapper further comprises a database wrapper interface in communication with the business component (see Dong et al, column 5, lines 38-41) and a database wrapper implementation implementing the domain object factory (see Dong et al, column 4, lines 30-41, and see Hartley et al, figures 4 and 5.)

As to claim 3, Hartley et al as modified teaches wherein the domain object factory further comprises a domain object interface in communication with the database wrapper (see Hartley et al, figure 5, and see column 12, lines 6-9) and a domain object factory implementation implementing the domain object (see Hartley et al, figure 5, and see column 11, lines 28-39.)

As to claim 4, Hartley et al as modified teaches wherein the domain object further comprises a domain object interface in communication with the domain object factory (see Hartley et al, figures 4 and 5) and a domain object implementation retrieving data from a datastore (see Hartley et al, column 10, lines 58-67.)

As to claim 5, Hartley et al as modified teaches wherein the domain object interface further comprises a transient data converter for converting the domain object from a persistent state to a transient state (see Hartley et al, figure 13, and see column 16, lines 6-51, where “objects from a persistent state” is read on “data formats from

outside sources”, and “transient state” is read on “standard formats”, and see column 21, lines 63-65.)

As to claims 6 and 11, Hartley et al as modified teaches wherein the datastore is a relational database (see Hartley et al, column 12, lines 6-12, and see column 21, lines 18-19, where “datastore” is read on “data storage device”).

As to claims 7 and 12, Hartley et al as modified teaches wherein the datastore is an object database (see Hartley et al, column 12, lines 12-14, where “object database” is read on “the master database including the stored domain objects”).

As to claims 8 and 13, Hartley et al as modified teaches wherein the datastore is accessed remotely (see Hartley et al, column 8, lines 33-37, and see column 21, lines 30-32.)

As to claim 9, Hartley et al teaches a method (see Abstract) for isolating a business component from specific implementations of a datastore (see column 5, lines 12-18, where “isolating a business component from specific implementation of a datastore” is read on “corresponding to one or more business objects that are highly specific to a client’s implementation), comprising:

(a) interfacing a database to a business component (see figure 4, where “business component” is illustrated as “business objects 35, and “database” is illustrated as “database tables 39);



- (c) interfacing a domain object factory to the database (see figure 5, where “database” is illustrated as “external data source”);
- (d) implementing the domain object factory (see figure 5, and see column 11, lines 28-39);
- (e) interfacing a domain object to the domain object factory (see figures 4 and 5); and
- (f) implementing the domain object to retrieve data from a datastore (see column 10, lines 58-67.)

For the teaching of “a database wrapper; wherein the database wrapper provides an abstraction”, the applicant is kindly directed to the remarks and discussions made in claim 1 above, in view of the teachings of Dong et al.

For the teachings of “providing an additional abstraction layer between the domain object factory and the business component”, the applicant is kindly directed to the remarks and discussions made in claim 1 above, in view of the teaching of Lipkin.

As to claim 10, Hartley et al as modified teaches the method further comprising converting data received from the datastore from a persistent state to a transient state (see Hartley et al, figure 13, and see column 16, lines 6-51, where “objects from a persistent state” is read on “data formats from outside sources”, and “transient state” is read on “standard formats”, and see column 21, lines 63-65.)

6. Claim 14 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hartley et al (U.S. patent No. 6,532,465) in view of McComb et al (U.S. Patent No. 6,006,224), and further in view of Lipkin (U.S. Patent No. 6,721,747.)

As to claim 14, Hartley et al teaches a method for (see Abstract) isolating a business component from specific implementations of a datastore (see column 5, lines 12-18, where “isolating a business component from specific implementation of a datastore” is read on “corresponding to one or more business objects that are highly specific to a client’s implementation), comprising:

- (a) supplying a database (see figure 2);
- (c) using the database to obtain a domain object factory (see figure 5);
- (d) using the domain object factory to create a domain object (see figure 5, and see column 11, lines 28-39);
- (e) converting the domain object from a persistent state to a transient state (see figure 13, and see column 16, lines 6-51, where “objects from a persistent state” is read on “data formats from outside sources”, and “transient state” is read on “standard formats”, and see column 21, lines 63-65);

Hartley et al does not teach:

- supplying a database wrapper;
- using the database wrapper to begin a database session;
- ending the database session; and
- returning the domain object to the business component.

McComb et al teaches a crucible query system (see Abstract) in which he teaches:

- supplying a database wrapper (see figure 2);

using the database wrapper (see column 7, lines 51-59) to begin a database session (see column 8, lines 41-42, where “begin a database session” is read on “open a connection to the specified database”);

ending the database session (see column 8, line 43, where “end the database session” is read on “close a database connection”); and

returning the domain object to the business component (see column 9, lines 61-64.)

Therefore, it would have been obvious to a person having ordinary skill in the art at the time the invention was made to have modified Hartley et al to include supplying a database wrapper; using the database wrapper to begin a database session; ending the database session; and returning the domain object to the business component.

It would have been obvious to a person having ordinary skill in the art at the time the invention was made to have modified Hartley et al with the teachings of McComb et al, because supplying a database wrapper would provide the system with “re-useable code that encapsulates procedural code in an application (such as a communication protocol or a database)”, where, “once encapsulated the item becomes an object”, as taught by McComb et al (see column 6, lines 14-17), and because using the database wrapper to begin a database session; ending the database session; and returning the domain object to the business component, would enable the system to communicate with various databases using standard database query languages, and therefore, would increase the flexibility and inter-operability of the system.

Hartley et al as modified still does not teach providing an additional abstraction layer between the domain object factory and the business component.

Lipkin teaches method and apparatus for an information server (see Abstract), in which he teaches providing an additional abstraction layer between the domain object factory and the business component (see column 5, lines 26-32, see column 20, lines 16-22, see column 27, lines 4-8, and see column 29, lines 40-45.)

Therefore, it would have been obvious to a person having ordinary skill in the art at the time the invention was made to have modified Hartley et al as modified, to include providing an additional abstraction layer between the domain object factory and the business component.

It would have been obvious to a person having ordinary skill in the art at the time the invention was made to have modified Hartley et al as modified, by the teaching of Lipkin, because providing an additional abstraction layer between the domain object factory and the business component, would enable the system to improve portability between servers (see Lipkin, column 5, lines line 31), and to provide a richer level of functionality and to allow future modifications with minimal impact on the client application code (see Lipkin, column 27, lines 4-8.)

7. Claims 5 and 10 are *further* rejected under 35 U.S.C. 103(a) as being unpatentable over Hartley et al (U.S. patent No. 6,532,465) in view of Dong et al (U.S. Patent No. 6,499,023), and further in view of Lipkin (U.S. Patent No. 6,721,747), as applied to

claims 1-13 above, and still further in view of Brownell et al (U.S. Patent No. 6,009,266.)

As to claims 5 and 10, in addition to the teaching of Hartley et al, as modified, on converting domain object/data from a persistent state to a transient state (see Hartley et al, figure 13, and see column 16, lines 6-51, where “objects from a persistent state” is read on “data formats from outside sources”, and “transient state” is read on “standard formats”, and see column 21, lines 63-65), Brownell et al teaches methods, apparatus and data structures for managing transient and persistent distributed objects (see Abstract), in which he teaches a transient data converter for converting the domain object from a persistent state to a transient state (see figure 4a, and see column 11, lines 1-17.)

Therefore, it would have been obvious to a person having ordinary skill in the art at the time the invention was made to have modified Hartley et al as modified to include a transient data converter for converting the domain object from a persistent state to a transient state.

It would have been obvious to a person having ordinary skill in the art at the time the invention was made to have modified Hartley et al as modified, by the teaching of Brownell et al, because a transient data converter for converting the domain object from a persistent state to a transient state, would enable the system to move object data from permanent storage devices into a temporary storage device, such as cache memory, so that the objects can be in transit and can be shared/distributed to other computers which are a part of the distributed object operating environment.

*Response to Arguments*

8. Applicant's arguments filed on 16-April-2004 with respect to the rejected claims in view of the cited references have been fully considered but they are moot in view of the new grounds of rejection.


*Conclusion*

9. Any inquiries concerning this communication or earlier communications from the examiner should be directed to Tony Mahmoudi whose telephone number is (703) 305-4887. The examiner can normally be reached on Mondays-Fridays from 08:00 am to 04:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dov Popovici, can be reached at (703) 305-3830.

tm

June 20, 2004

  
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